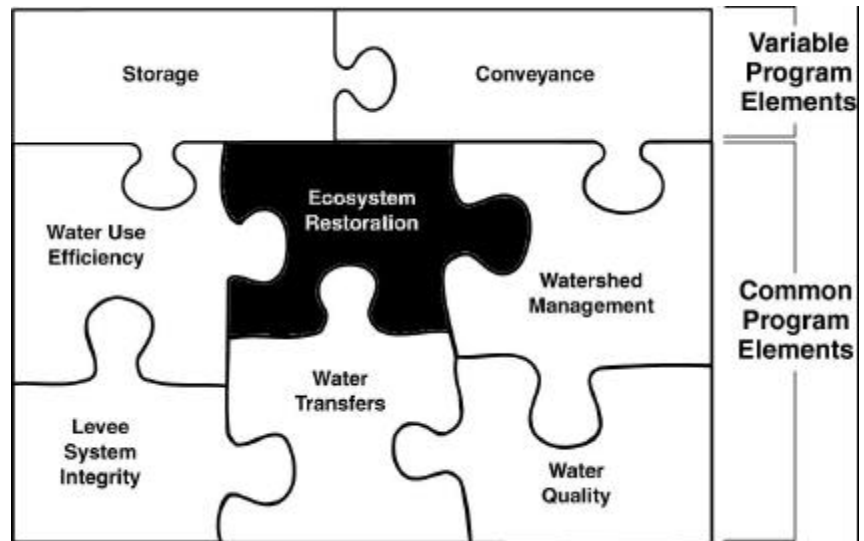




CALFED BAY-DELTA PROGRAM

Ecosystem Restoration Program

The CALFED Bay-Delta Program is a cooperative effort among state and federal agencies and the public to ensure a healthy ecosystem, reliable water supplies, good quality water, and stable levees in California's Bay-Delta system. Ecosystem restoration is one of six Program elements common to each of the three potential solutions CALFED has developed, represents a significant investment in the system and will greatly reduce system conflicts..



The Problem

The California Bay-Delta ecosystem continues to deteriorate. It no longer provides the habitat necessary to enable native fish, wildlife, and plants to flourish. The Bay-Delta system is home to plants and animals found nowhere else on the planet. Millions of birds migrate through and live in the Bay-Delta, as do more than 53 species of fish, including one of the most productive natural salmon fisheries on the west coast. However, since the early 1800s, 700,000 acres of land naturally serving as water overflow areas and seasonal habitat have been converted to agricultural and urban uses. Other practices such as hydraulic mining and modern water project operations have also contributed to habitat loss and decline. Without ecosystem restoration, native and valuable plant and animal populations will continue to be at risk.

Ecosystem restoration is one of six Program elements common to each of the three potential solutions CALFED has developed.

The Goal

To improve and increase aquatic and terrestrial habitats and improve ecological functions in the Bay-Delta to support sustainable populations of diverse and valuable plant and animal species.

Ways This Can Be Accomplished

The Ecosystem Restoration Common Program aims to take advantage of natural processes whenever possible to achieve its goals. For example, efforts are proposed to maintain or re-establish "meander zones" upstream of the Delta, where tributaries can flow within their natural channels. It also seeks to restore some of the ecosystem's natural resilience. Restoration activities that benefit several species and contribute to achieving other Program goals (water quality, levee stability, and water supply reliability) will be given priority. This Common Program contains the following types of actions:

- Restore, protect and manage important habitat types
- Restore critical instream flows and Delta outflow in key springtime periods
- Develop floodways along the lower Cosumnes and San Joaquin rivers
- Construct setback levees to increase floodplain interactions and provide seasonal aquatic and riparian habitats
- Develop prevention and control programs for invasive species
- Protect sediment sources that feed streams and rivers in the Bay-Delta system
- Support local watershed planning and management programs
- Install state-of-the-art fish screens
- Implement or expand fish marking programs at hatcheries and fish production facilities in the Bay-Delta system
- Modify barriers that temporarily impair fish passage
- Evaluate and reduce adverse effects on contaminants
- Implement a strong ecosystem monitoring program to evaluate short- and long-term trends in ecosystem health
- Implement a well-funded research program to provide information needed for future solutions and decisions

Key Benefits

- Reverses decline in ecosystem health
- Supports a healthy Bay-Delta ecosystem
- Supports sustainable production and survival of plant and wildlife species
- Reduces the conflict between fisheries and water supply opportunities

Issues & Concerns

- Must integrate resource priorities, scientific oversight, and collaborative decision making involving local entities
- Adaptive management creates assurance issues that may be best addressed by new institutional structures
- Habitat restoration actions require significant agricultural land conversion
- Differing views on the success of restoring habitat in leading to recovery of fish populations without reducing diversion effects and the restoration of natural flow patterns
- Differing views over inclusion of restoration actions in the San Francisco Bay area
- Importance of toxics as an ecosystem stressor must be better understood
- Need understanding and validation of conceptual ecosystem models
- Concern about water needed to meet ecosystem restoration flow objectives